Energy-Related Environmental Research

California Energy Commission

Request for Proposals

RFP 500-08-003

Pre-Bid Conference

January 6, 2009

PIER was established in 1996 as part of Electricity Restructuring - SB 1890

– Public Interest Research of benefit to electricity and natural gas ratepayers not adequately provided by the competitive markets

–Leverages public and private investments to advance energy-related R&D to inform California decision makers and provide Californians with clean, affordable energy services

–$62.5 M annual funding for electricity research

–Expanded in 2005 by CPUC rule to include natural gas research; will provide $24M by 2009

Program Areas in PIER

- Transportation
- Renewables
- System Infrastructure
- Clean Generation
- Ag and Industrial Water Use
- Efficiency
- Environmental

Strategic View – PIER EA Electricity and Natural Gas

- The PIER Environmental Research Area's mission is to develop cost-effective approaches to evaluating and resolving environmental effects of energy production, delivery and use in California; and explore how new electricity applications and products can solve environmental problems.
  - Air Quality
  - Aquatic Resources
  - Community Scale Energy Research
  - Terrestrial Resources
  - Climate Change

RFP Purpose

- Provide more comprehensive understanding of relationship between energy generation, transmission & use on CA's environment
- Provide tools and/or scientific knowledge to avoid or mitigate environmental impacts from energy generation, transmission & use
- Opportunity for diverse experts to build partnerships & move forward in a coordinated fashion, thus building upon past work, taking advantage of synergies, & avoiding unnecessary duplication
- Solicitation and forms: "current solicitations"

  http:www.energy.ca.gov/contracts/index.html

General Information

- Release of Program Opportunity Notice: December 8, 2008
- Proposal Workshop: January 6, 2009
- Deadline to Submit Questions: **January 7, 2009**
- Post Questions & Answers to Website: **January 14, 2009**
- **Deadline to Submit Proposals: January 28, 2009 4:00 p.m. PST**
- Interview Applicants (if necessary): About February 16, 2009
- Post Notice of Proposed Award: About March 9, 2009
- Approval of Awards at Energy Commission Business Meeting June-July 2009

General Information

- **Up to $4,250,000 awarded**

  Among four topics

  – Air Quality: $500,000
    - up to $500,000 per proposal

  – Aquatic Resources: $1,000,000
    - between $100,000 and $500,000 per proposal

  – Terrestrial Resources $2,250,000
    - between $100,000 and $750,000 per proposal

  – Community Scale Energy Research $500,000
    - between $75,000 and $500,000 per proposal

TOPIC AREAS

Air Quality Research

- RPS
  - 20% by 2010
  - 33% by 2020
- Need to integrate variable & intermittent sources
  - Maintain reliability
- Research Question – What are the AQ Implications in CA of the RPS?

- $500,000 total
- 1 or more projects
- 1 year
- Match funds encouraged

AQUATIC RESOURCES

- Address & resolve hydropower-induced water temperature effects on downstream aquatic species & habitats in CA
- Inform FERC hydropower relicensing process
  - Identify cost effective tools that will be embraced by relicensing process.
- Research applicable to range of localities –
  - Not be only applicable to single site-specific situation.

- $1,000,000 total
- Between $100,000 and $500,000
- 3 years
- Min 15% match funds

Terrestrial Resources

- Birds & bats killed by energy utility structures
- Disrupts power supply, damages electrical equipment, & increases permit requirements & processing time
- Research – Evaluate, reduce or resolve bird & bat impacts from collision & electrocution with utility structures
  - Build on existing studies
  - New studies based on 3 roadmaps
  - http://www.energy.ca.gov/research/environmental/reports.html

- $2,250,000 total
- Between $100,000 and $750,000
- 4 years
- Match funds encouraged

Community Scale Energy Research

- Analyze and quantify energy use and demand associated with sustainable urban energy planning and development practices. Also analyze and quantify environmental benefits and tradeoffs.

- Research topics
  - Individual or combined sustainable strategies for the built environment or planned sites, neighborhoods and new communities.
  - Innovative use of existing or development and demonstration of new tools to better support sustainable urban energy planning in future development

- $500,000 total
- Minimum $75,000
- 3 years
- Match funds encouraged

General Information

All proposals:

- Clearly demonstrate how research results will advance science and/or technology not adequately provided for by competitive & regulated market & that will result in public benefit
- Identify barriers to implementation & options to overcome those barriers

Required Documents and Format

Must follow required format to be accepted:

- Signed cover sheet with legal and contact information as well as the topic area and budget request.
- A no-more than two page executive summary of the proposal.
- Description of the proposed research approach and justification.
- Work Statement (Word) with a task-by-task description of your project.
- Short biographies of the principal Investigator and key research partners.
- Detailed project budget information (Excel).
- Any other significant factors to enhance the value of the proposal, such as highlights of the previous work and innovative features related to the proposed project.
- Must agree to Grant Agreement Terms & Conditions

Scoring

1. Proposal responds to the Project Description provided in each topic area - Max: 25 pts. (Min 17 pts to Pass)
2. Proposal provides clear, meaningful, and measurable objectives, project description, products, due dates – Max: 20 pts
3. Budget is reasonable and appropriate – Max: 15 pts
4. PI and project team are well qualified – Max: 15 pts
5. Overall technical merit and project is likely to succeed – Max: 25 pts

Scoring

- Pass/Fail: Minimum of 17 on technical criteria #1
- Total of 70 points to pass
- Preference points added to CA-based Entity
- Highest Rank proposals funded until funds exhausted

California Based Entity

AB 2267 (Fuentes) requires CBE be given preference

CBE - corporation or other business form organized for transaction of business:

- Headquarters or office in California AND
- Substantially manufactures the product or substantially performs the research within California that is the subject of the award

The proposal must include a CBE

- Either the recipient or subcontractor
- CBE(s) must receive 50% or more of the PIER funds awarded

See Exhibit I of the proposal package for more information

California Based Entity

Technical Score	Additional Points
70-75	1
76-81	2
82-87	3
88-93	4
94-100	5

Proposals receiving passing score will receive preference points

Process

- A notice of proposed awards reviewed and approved by R&D Committee.
- R&D Committee has discretion to accept/reject each proposal
- Grant Agreements prepared
- Approval at Energy Commission Business Meeting

Contact Information:

Sandra Fromm
Energy Systems Research
California Energy Commission
1516 Ninth Street, MS-43
Sacramento, CA 95814
Telephone: (916) 653-9355
Fax: (916) 654-4872
Email: sfromm@energy.state.ca.us

Questions and Answers

Question and Answer Session

What is Community Scale Energy Research?

Community development that results in efficient resource delivery and use in buildings, infrastructure and for personal transportation. Smart energy growth maximizes the potential for meeting energy, water, transportation and food needs via local or regional resources while minimizing pollution and maintaining land to support native plant and animal species. Smart energy growth results in decreased per capita resource demands by exploiting the practices of source reduction, reuse and recycling in the building of communities, neighborhoods and supporting infrastructure.